

Appendix 11: Criteria for changes to the system of Biologically Unique Landscapes

Biologically Unique Landscapes (BULs) were identified in order to increase the efficiency and effectiveness of conservation by focusing efforts in areas with concentrations of at-risk species and high quality natural communities, in a relatively intact landscape. These landscapes offer the best opportunities for conserving the full array of biological diversity in the state. These landscapes were delineated using the best available data at that time. It was recognized that BUL boundaries could be changed or new BULs added as new information became available on the distribution of at-risk species and high quality examples of natural communities.

BULs were designed with the goal of including sites where there is the highest likelihood that the populations and communities will persist over the long term. For individual species, this would include sites with a large population size, good age-class structure and evidence of successful reproduction. For natural communities, this would include sites with a good representation of expected native species, few invasive exotics, and relatively intact ecological processes that maintain these communities (e.g., fire, grazing, flooding). BULs contain high quality examples of at-risk species populations and ecological communities that are nested together and exist within functional landscapes.

Major Additions or Deletions to the BUL System

Adding new BULs or changing the size of existing BULs by more than 10%

Analysis of the distribution and abundance of species and communities within BULs indicates that the original system of BULs does not provide ample opportunity to meet the Natural Legacy conservation goals for all at-risk species and natural communities. Also, in future revisions of the Nebraska Natural Legacy Project, new species and communities will likely be added to the at-risk species and natural communities lists and their distributions may lie outside of existing BULs. In addition, portions of, or entire, BULs may become degraded to the point that they can no longer support the objectives for which they were designated. Thus, changes in the system will be needed.

Additions to the system should complement the existing system and not merely repeat what is already there. They should provide opportunities to meet conservation goals for species and communities that can't be met in the existing system. Proposed additions should strive to include the most intact landscape available and contain multiple occurrences of at-risk species and/or natural communities.

The following criteria were developed by the Natural Legacy Science Team to guide adjustments to the system.

Criteria for additions to the BUL system (expanding existing or adding new BULs):

Addition must contain documented, high-quality occurrences of at-risk species and/or natural communities and provide opportunities to meet species and/or community goals that can't be met in the existing system of BULs.

(See below for the current list of species and communities that would qualify for these criteria)

Criteria for deletions from the BUL system (removing portions of, or entire, BULs):

The area to be removed is degraded to the point that it does not contain high-quality occurrences of at-risk species and/or natural communities and does not provide opportunities to meet species and/or community goals.

Minor Boundary Adjustments

The original BUL boundaries were drawn using the best available information, typically using land-cover maps and including areas that appeared to be relatively intact natural habitats around core areas of documented species and community targets. Given the somewhat coarse scale at which the boundaries were drawn, they no doubt included some areas that are of low conservation value and excluded some adjacent areas that are of high conservation value. To increase the effectiveness of the boundaries, minor adjustments can be made to BUL boundaries. Proposals for minor boundary adjustments are encouraged to include recommendations for deletions, when appropriate, as well as additions. Again, proposed additions to a BUL should strive to include the most intact landscape available and contain multiple occurrences of at-risk species and/or natural communities. Proposals for minor boundary adjustments should meet the following criteria.

Criteria for minor boundary adjustments

Addition to a BUL must contain documented, high-quality occurrences of at-risk species and/or natural communities.

Area to be removed is degraded to the point that it does not contain high-quality occurrences of at-risk species and/or natural communities and does not provide opportunities to meet species and/or community goals.

The boundary change is minor – moving the boundary a few miles or resulting in no more than 10% increase or decrease in the size of the BUL.

Species and communities that satisfy the major addition criteria

Tier I species for which current data and expert knowledge indicate there was not ample opportunity to meet their conservation goals in the existing system of BULs. Major additions to existing BULs or designating new BULs could be done to conserve these species.

Birds

Buff-breasted Sandpiper
Henslow's Sparrow
McCown's Longspur
Mountain Plover
Short-eared Owl

Mussels

Pimpleback
Pistolgrip
Plain Pocketbook

Fish

Finescale Dace
Northern Redbelly Dace
Topeka Shiner

Plants

Iowa Moonwort
Missouri Sedge
Snow Trillium

Insects

Bucholz Black Dash
Iowa Skipper
Ottoe Skipper
Platte River Caddisfly

Natural communities for which current data and expert knowledge indicate there was not ample opportunity to meet their conservation goals in the existing system of BULs. Additions to existing BULs or designating new BULs could be done to conserve these communities

Eastern Cordgrass Wet Prairie
Eastern Sedge Wet Meadow
Southern Sand/Gravel Mixedgrass Prairie